California Environmental Protection Agency AIR RESOURCES BOARD	HONDA MOTOR CO., LTD.	EXECUTIVE ORDER M-002-0537 New On-Road Motorcycles

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the engine and emission control systems produced by the manufacturer are certified as described below for four-stroke gasoline-powered motorcycles. Production vehicles shall be in all material respects the same as those for which certification is granted. **The manufacturer shall ensure that character "C" or "3" is not used in the eighth (8th) position of the vehicle identification number (VIN) of all vehicles in the engine family listed below. Violation of this VIN provision may result in incorrect registration of the vehicles.**

MODEL YEAR	ENGINE FAMILY	EVAPORATIVE FAMILY	ENGINE DISPLACEMENT (cc)	CLASS
2007	7HNXC0.64ABA	7HNXE0019AZN	644	III

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	VEHICLE MODELS (equivalent inertia mass in kilograms, kg)	* = not applicable
PAIR	XR650L (250 kg)	

ABBREVIATIONS: EM=engine modification TWC=three-way catalyst OC=oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2 (prefix)=parallel (2) (suffix)=in series

The following are the exhaust hydrocarbons plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) standards, or designated HC+NOx standard as applicable, and certification levels in grams per kilometer (g/km), and evaporative standard and certification level in grams per test (g/test) for this engine/evaporative family. The designated HC+NOx standard, as applicable, shall be listed on the permanent tune-up label.

				EARLY COMPLIANCE CREDIT MULTIPLIER			*
HC+NOx (g/km)				CO (g/km)		EVAPORATIVE (g/test)	
CORPORATE AVERAGE STANDARD	DESIGNATED STANDARD	(DIRECT) STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL	STANDARD	CERTIFICATION LEVEL
*	*	1.4	0.7	12	9	2.0	0.4

BE IT FURTHER RESOLVED: That certification to the designated HC+NOx standard listed above, as applicable, is subject to the following terms, limitations and conditions:

The designated HC+NOx standard shall be the exhaust emission limit for this engine family and cannot be changed during the model year. It serves as the HC+NOx exhaust standard applicable to this engine family for determining compliance with Title 13, California Code of Regulations, Sections 1958(b) and 2101.

BE IT FURTHER RESOLVED: That for certification to the HC+NOx standard, or designated standard as applicable, listed above, the listed vehicle models are granted an early-compliance credit multiplier as indicated above pursuant to Title 13, California Code of Regulations, Section 1958(g).

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all materials required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Code of Regulations, Sections 2035 et seq.).

BE IT FURTHER RESOLVED: That because the listed motorcycles are certified to 0.2 grams per test or more below the applicable evaporative standard, the vehicles are exempt from complying with the Air Resources Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" pursuant to Executive Order G-70-16-E.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Vehicles in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 1st day of June 2006.

J. Lourenco

Allen Lyons, Chief
Mobile Source Operations Division

EO No. M-002-0537

Motorcycle Engine Family Information Form

1. Manufacturer: Honda Motor Co., Ltd.

2. Certification contact Person, address, phone, and fax:

Julie Barkow-Peck, Certification Assistant, Certification Department
American Honda Motor Co., Inc. Mail Stop 500-2C-8A
1919 Torrance Blvd., Torrance CA 90501-2746
Telephone: (310)783-3417 Fax: (310)783-3510 E-Mail: Julie_Peck@ahm.honda.com

3. Model Year: 2007

4. Process Code: New
(new, correction, revised, r/c, f/f, etc.)

5. Engine Family: 7HNXC0.64ABA
   50s Eng. Code: N/A
   49s Eng. Code: 7CW1
   Calif.Eng. Code: 7CW2

6. Emission Control System: PAIR

7. Calif. ~~Designated~~ Direct Standard (g/km): ☐ N/A ☐ HC ☒ HC+NOx -1.4

8. Project Annual Sales:

9. New Technology: ☐ Yes ☒ No
If yes, cite the correspondence or reference the submittal document: N/A

10. Displacement (cc): 644

11. Number of Cylinder: 1

12. Cylinder Arrangement: Vertical

13. Cylinder Head Configuration: OHV/OHC

14. Type of Cooling: Air Cooled

15. Combustion Cycle: Otto

16. Method of Aspiration: Natural

17. Fuel System: Carburetor

18. Number of Catalytic Converters: N/A

19. Adjustable Parameters:

Parameters (s)	Adjustable Range (or N/A)	Tamper Resistance Method (or N/A)	Method Approved
Carburetor Pilot Screw	Limited to 7/8 turn leaner side only	Limiter cap	N/A

20. AECDs in the Emission Control System:

Exhaust System	Evaporative System
AECDs In System: PAIR Control Valve	AECDs In System: N/A

Processed by Stan Hada 5-22-06

EO No. M-002-0537

Engine Family: 7HNXC0.64ABA

Motorcycle Test Information Form

27. Are you carrying over test results from a previously certified family? ☒ Yes ☐ No
    a) If yes, indicate family name: 6HNXC0.64ABA
    b) Is the family being certified identical to the family from which the data is being carried over? Yes

28. Model Designation of Test Vehicle: XR650L

29. Test Information Number: 403

30. Vehicle ID: JH2RD06123M100357

31. Service Accumulation Duration (km): 15014

32. Maximum Rated Power (kW @ RPM): 29.8 @ 6000

33. Displacement (cc): 644

34. Certification Fuel: Indolene

35. Test Data Set: 1

36. Road Load (nt): 125.3

37. Inertia Mass (kg): 250

38. N/V: 42.7

39. Evap Bench Test Method Approval:
    Data: March 9, 1983
    Reference: 17.01.01-1 (ARB) & 17.01.02-2 (ARB) thru 17.01.02-12 (ARB) in 1999 Model Year Application

40. Unscheduled Maintenance: ☒ Yes ☐ No

41. If yes Vehicle Log Provided:
    See Section 7 page 14

42. Exhaust Emission Deterioration Factor

Test Number	System Kilometers	Emission Values HC	CO	NOx	
1	3516	0.28	7.2	0.36	
2	6419	0.28	7.4	0.37	
3	6449	0.27	7.6	0.34	
4	9616	0.29	7.4	0.33	
5	12815	0.32	7.5	0.35	
6	12845	0.26	7.4	0.34	
7	15014	0.32	8.3	0.31	

Interpolated Values at 15,000 km: HC = 0.3047 CO = 7.8419 NOx = 0.3252

Extrapolated Values at 30,000 km: HC = 0.3490 CO = 8.6613 NOx = 0.2768

Check One:	
Regular DF	X
Modified DF	
If Different Vehicle Specify Vehicle ID	

43. Emission Test Results:

Official Test Results		Test 1	Test 2	Test 3	Test 4		Deterioration Factors
g/km	CO	8.3				(X)	1.104
g/km	CO_2	89.7					———
g/km	HC	0.32				(X)	1.145
g/km	NOx	0.31				(X)	1.000 (0.851)
g/test	Evap.	0.28				(+)	0.1

( ) : Calculated Value

44. Certification Levels:

g/km	CO (EPA)	9.2			
g/km	CO (ARB)	9			
g/km	HC+NOx	0.7			
g/test	Evap.	0.4			

Evaporative Emission Information

45. Evaporative Family: 7HNXE0019AZN
46. Number of Evap. Canisters: 1
47. Design Working Capacity(g): 19.0
48. Configuration: Open Bottom
49. Number of storage Areas: 1
50. Fuel Reservoir Volume(cc): 60
51. Vent System Configuration: External
52. Nominal Tank Capacity(liter): 10.5
    * : In our 1999 application certification
53. Engine Displacement Class: III
54. Storage Medium Composition: Charcoal
55. Evap. Canister Medium Volume(cc): 360 +/- 10
    Evap. Storage Element(g)**
56. Evap. Family Sales:
57. Engine Code: 7CW2
58. Evap. Emission Family Code: 07ZN
59. Evap. Emission Family Group: A
60. **Overall Evap D.F.=** 0.1
    ** : Design Working Capacity

Bench DF

61. Test Vehicle ID: 89CP-01
62. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3500	0.43
2	3500	0.40
3	3500	0.33
4	15000	0.55
5	15000	0.52
6	15000	0.45
7		
Interpolated Values at 15,000 km: =		**0.507**
Extrapolated Values at 30,000 km: =		**0.663**
Bench Test D.F. = 0.16		

Check One:	
Regular DF	X
Modified DF	
If Different Vehicle Specify Vehicle ID	

Vehicle DF

63. Test Vehicle ID: 93CW-01
64. Test Results:

Test Number	System Kilometers	Evap. Emission Values (g/test)
1	3653	0.30
2	6480	0.28
3	6510	0.29
4	9617	0.33
5	12936	0.30
6	12966	0.36
7	15015	0.28
Interpolated Values at 15,000 km: =		**0.315**
Extrapolated Values at 30,000 km: =		**0.342**
Vehicle Test D.F. = 0.03		

Engine Family: 7HNXC0.64ABA

Motorcycle Model Summary Form

65. Model Designation	66. Worst Case	67. Disp. (cc)	68. Bore / Stroke (mm)	69. Basic Ignition Timing (degrees)	70. Power (kW)	71. Rated Speed (RPM)	72. Rated Torque (Nm)	73. Rated Speed (RPM)
XR650L	X	644	100.0 / 82.0	8 (BTDC)	29.8	6000	50	5000

65. Model Designation	74. EIM (kg)	75. Loaded Vehicle Weight Range (kg)	76. Road Load (nt)	77. Total Vehicle Mass (kg)	78. Full Weight with All Factory Options (kg)	79. Trans. Type	80. N/V
XR650L	250	246 - 255	125.3	255	255	M5	42.7

Item 78:
Curb weight, Rider weight, Production tolerance & Weight of optional accessories